

CALS

Continuous Acquisition and Life-Cycle Support (CALS) to improve enterprise competitiveness

CALS is a Department of Defense (DoD) and industry strategy to accelerate the transition from paper-intensive non-integrated product development design, engineering, manufacturing, and support processes to a highly automated, integrated mode of operation. CALS requires developing (1) standards for data storage and exchange and (2) automated systems to store, manage, and distribute this information. The CALS vision includes enterprise integration, agile manufacturing, and virtual factories.

The objectives of the CALS strategy are to improve the timeliness, reduce the cost, and improve the quality of products and their

supporting technical data. Achieving these objectives will lead to increased operational readiness and industrial competitiveness. CALS supports revising and retrieving documents and other technical data through the several phases of a product's life cycle.

Platform independence

The CALS strategy enables creating data once and using it many times, through the use of a minimal set of broadly accepted platform-independent national and international digital data standards. CALS' philosophy is to make use of these existing and emerging standards in all aspects of the initiative.

Technical standards define the medium and process of exchanging data between sending and receiving systems. These standards include federal standards, military standards and specifications, and other relevant conventions for the management, formatting, and physical media or telecommunications exchange of text, graphics, alphanumerics, and other forms of digital data.

CALS at LLNL

LLNL helps develop and test the CALS digital data interchange standards to ensure that they are usable by DoD and industry. In addition to technical expertise, we provide a neutral ground for unbiased development and testing of CALS. We have also developed a series of test packets for self-evaluation of CALS readiness for SGML, IGES, CGM, and CCITT Group 4 raster.

Availability: CALS is available now. The CALS standards have been mandated for use in the delivery of technical data for all new DoD weapon systems, endorsed by the Department of Commerce, adopted by the airline and automotive industries for their on-line maintenance manuals and CAD databases, and are used for the hypertext databases on the World Wide Web. As technologies evolve and paradigms change, additional standards will be embraced by the CALS initiative.

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APPLICATIONS

- Data integration, exchange, and access among government and industry databases
- Re-engineering of business and manufacturing processes
- On-line databases for documents containing embedded illustrations
- Agile manufacturing or development of virtual (distributed) factories
- Enterprise integration and development of worldwide electronic markets
- Development, testing, or selection of new and emerging standards